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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/582,305

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William Jones

ACH-3025 US

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Albemarle Netherlands B.V.
Patent and Trademark Department
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EXAMINER

QIAN, YUN

ART UNIT

PAPER NUMBER

1793

MAIL DATE

DELIVERY MODE

03/03/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/582,305	Applicant(s) JONES ET AL.	
	Examiner YUN QIAN	Art Unit 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 December 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 14-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 14-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Status of Claims

Claims 14-25 remain for examination. Claims 1-13 are canceled. Claims 14-25 are newly added.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 14-25 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-15 of copending Application No. 10/582,601 in view of Kim et al. (US 5,603,823).

This is a provisional obviousness-type double patenting rejection.

Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of copending Application No. 10/582,601 teach process for preparation of an oxidic catalyst.

Although co-pending application does not specifically state that the catalyst composition can be used to improve metals passivation as per applicant claim 14, Kim discloses catalytic cracking catalysts comprising MgO , Al_2O_3 and La_2O_3 components as the co-pending application. The composition of the catalyst may be combined with any known fillers to form particles suitable for use in an FCC process to passivating poisoning metals such as V and/or Ni as instant claims (col.1, line 5-col.2, lines 67).

It would have been obvious to one ordinary skill in the art at the time of the invention to apply the catalyst of co-pending application in FCC process, motivated by the fact that the catalyst poisoning effects of metals (such as vanadium and/or nickel) are diminished (col.2, lines 64-67).

Regarding claims 15 and 19-21, Euzen et al. teaches an addition of the homogenized metal salts solution simultaneously with ammonia to precipitate the hydroxide at pH of 9 as the instantly claimed (col.7, lines 1-45). Since the references, as combined, teach all of the claimed reagents, composition and process conditions, the physical properties of oxidic catalyst composition (i.e. without anionic clay being formed, 18-60% wt of rare earth metal or transition metal oxide, X-ray patterns, etc.) would necessarily follow as set forth in MPEP 2112.01(II).¹

¹ "Products of identical chemical composition can not have mutually exclusive properties." A chemical composition and its properties are inseparable. Therefore, if the prior art teaches the identical chemical structure, the properties applicant discloses and/or claims are necessarily present. In re Spada, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990)

Claims 14-25 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 4-5 of copending Application No. 10/582,593 in view of Kim et al. (US 5,603,823).

This is a provisional obviousness-type double patenting rejection.

Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of copending Application No. 10/582,601 teach process for preparation of an oxidic catalyst.

Although co-pending application does not specifically state that the catalyst composition can improve metals passivation as per applicant claim 14, Kim discloses catalytic cracking catalysts comprising MgO, Al₂O₃ and La₂O₃ components as the co-pending application. The composition of the catalyst may be combined with any known fillers to form particles suitable for use in an FCC process to passivating poisoning metals such as V and/or Ni as instant claims (col.1, line 5-col.2, lines 67).

It would have been obvious to one ordinary skill in the art at the time of the invention to apply the catalyst of co-pending application in FCC process, motivated by the fact that the catalyst poisoning effects of metals (such as vanadium and/or nickel) are diminished (col.2, lines 64-67).

Regarding claims 15 and 19-21, Euzen et al. teaches an addition of the homogenized metal salts solution simultaneously with ammonia to precipitate the hydroxide at pH of 9 as the instantly claimed (col.7, lines 1-45). Since the references, as combined, teach all of the claimed reagents, composition and process conditions, the

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physical properties of oxidic catalyst composition (i.e. without anionic clay being formed, 18-60% wt of rare earth metal or transition metal oxide, X-ray patterns, etc.) would necessarily follow as set forth in MPEP 2112.01(II).

Claim Objection

Regarding claim 24, the abbreviation "FCC" is vague. It should not be used and should be replaced by an indication of what it is intended to cover. For the purposes of examination, the "FCC" in claim 24 is interpreted as "fluid catalytic cracking".

Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein

were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 14-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Euzen et al. (US 5,830,822) in view of Kim et al. (US 5,603,823).

Regarding claims 14 and 16-18, Euzen et al. teaches a process for the preparation of a high temperature resistant catalyst, comprising a trivalent aluminium compound as instantly claimed 14 and 16, a divalent metal selected from Mn, Co, Mg, Ba, Fe as instantly claimed 14 and 17, and a rare earth metal Lanthanum salt as instantly claimed 14 and 18 (col.3, lines 26-36, and claims 12 and 13). The catalyst has a formula of $A_{1-x}B_yC_zAl_{12-y-z}O_{19-\delta}$ wherein A represents rare earth metal, x has values of 0 to 0.25.

By forming a catalyst of formula of $A_{1-x}B_yC_zAl_{12-y-z}O_{19-\delta}$ wherein A represents rare earth metal, x has values of 0 to 0.25, the catalyst obviously has more than 18 wt% of rare earth metal compound, as claimed.

Euzen et al. teaches using a sodium-free base such as the ammonia or potassium hydroxide to precipitate the hydroxides (col.7, line 34 and col.9, line 1).

Although Euzen et al. does not specifically state that the catalyst composition can be used to improve metals passivation as per applicant claim 14, Kim discloses catalytic cracking catalysts comprising MgO, Al₂O₃ and La₂O₃ components as Euzen's. The

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composition of the catalyst may be combined with any known fillers to form particles suitable for use in an FCC process to passivating poisoning metals such as V and/or Ni as instant claims (col.1, line 5-col.2, lines 67).

It would have been obvious to one ordinary skill in the art at the time of the invention to apply the catalyst of Euzen in FCC process, motivated by the fact that the catalyst poisoning effects of metals (such as vanadium and/or nickel) are diminished (col.2, lines 64-67).

Regarding claims 15 and 19-21, Euzen et al. teaches an addition of the homogenized metal salts solution simultaneously with ammonia to precipitate the hydroxide at pH of 9 as the instantly claimed (col.7, lines 1-45). Since the references, as combined, teach all of the claimed reagents, composition and process conditions, the physical properties of oxidic catalyst composition (i.e. without anionic clay being formed, 18-60% wt of rare earth metal or transition metal oxide, X-ray patterns, etc.) would necessarily follow as set forth in MPEP 2112.01(II).

Regarding claim 22, Kim discloses catalytic cracking catalysts comprising MgO , Al_2O_3 and La_2O_3 components as Euzen's. The composition of the catalyst may be combined with any known filler s or matrix to form particles suitable for use in an FCC process as instant claim (col.2, lines 54-67).

Regarding claims 23-25, as discussed above, the catalytic cracking catalysis and additives taught by Kim et al. is used to passivated poisoning metals in FCC process and reduce SO_x and NO_x in oil refining process as the instant claims (abstract, and col.1, lines 5-67).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to YUN QIAN whose telephone number is (571)270-5834. The examiner can normally be reached on Monday-Thursday, 10:00am -4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Melvin Curtis Mayes can be reached on 571-272-1234. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for

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published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/YUN QIAN/
Examiner, Art Unit 1793

February 25, 2010

/Melvin Curtis Mayes/
Supervisory Patent Examiner, Art Unit 1793